

REMARKS

This application is a Divisional patent application of United States Patent Application Serial No. 09/793,874, now United States Patent No. 6,627,041 to *Jeffrey A. Lee*.

This *Amendment* accompanies a *Request for Continued Examiner Under 37 CFR §1.114*. The interview of June 29, 2006 is gratefully acknowledged. The Examiner's summary is accurate and the reasons presented for allowance are summarized below.

In the outstanding *Official Action* of May 2, 2006, Claims 83-84 were withdrawn from further consideration as being drawn to a non-elected invention. Claims 83 and 84 have been cancelled; Claim 85 has been added which is more closely linked to independent Claims 13 and 73.

All of the outstanding art rejections were based on United States Patent No. 6,413,362 to *Hu* (not a statutory bar) having a §102(e) date of November 24, 1999. Applicant had previously submitted a *Declaration Under 37 CFR §1.131* to antedate this reference; however, important exhibits were omitted (pages 24 and 25 of a *Research Report* prior to November 24, 1999). Enclosed herewith is another copy of the *Declaration of Jeffrey A. Lee Under 37 CFR §1.131* wherein the pages are included. Paragraphs 3 and 4, together with the Exhibits, antedate the *Hu* '362 patent:

3. That well before November 24, 1999, and under his supervision, the invention of the above-noted patent application was made on a papermachine at the Research Center where he is employed in Neenah, Wisconsin. Specifically, curled and uncurled fiber from the same source were mixed in a headbox and made into absorbent sheet. The curled fiber component used was concurrently bleached, heat-treated and curled as is described in the above-noted patent application.
4. Attached to this Declaration are (redacted) pages 24 and 25 of a Research Report dated prior to November, 1999 confirming manufacture of the absorbent sheet as recited in paragraph 3 above. The first full paragraph on page 24 of the report closely tracks the last paragraph on page 38 of the application as filed and Table 7 of the report has the data appearing in Table 9 of the patent application as originally filed, page 39 thereof. Further, **Figure 2** of the patent application is a version of **Figure 29** of the Research Report; appearing on the attached page 25.

Table 9 of the application as filed matches Table 7 of the *Research Report* and the text appearing at page 38 of the application as filed, lines 17+ is substantially identical to the text of the *Research Report* at page 24 thereof. It is further seen that **Figure 2** of the application as filed is a version of **Figure 30** of the *Research Report* (not **Figure 29** of the *Research Report*, as originally thought). Compare, page 25 of the *Research Report* with the application as filed, **Figure 2**. In any event, the claims in this Divisional patent application are based on Table 9 of the application as filed (Table 7 of the *Research Report*) and are believed to most clearly antedate the *Hu* '362 patent in all respects.

New Claim 85 is similar to Claim 13; however, it contains the proviso (4) that the length weighted curl index of the treated fiber is at least 20% higher than that of the fiber prior to treatment and that (5) the step of heat treating and convolving the fiber has a duration of from 0.01 to about 20 seconds. Support is found in the application as filed, page 11, lines 24-27 (20% higher) as well as originally filed Claim 27 (application as filed) concerning the treatment duration. Similar language concerning treatment duration has been added to Claim 73 in order to link the independent claims.

The terminology "uncurled pulp from the same source" was objected to under 35 USC §112, first paragraph. That language has been deleted and the claims have been amended to recite that the mixed pulp is produced by mixing the pulp with a second pulp of lower length weighted curl index to produce a mixed pulp having a length weighted curl index intermediate the curled and uncurled pulp. This language is supported by Table 9, second row (% Bleached Fiber) and penultimate row (Headbox Mean Curl):

Table 9. Base Sheet Results

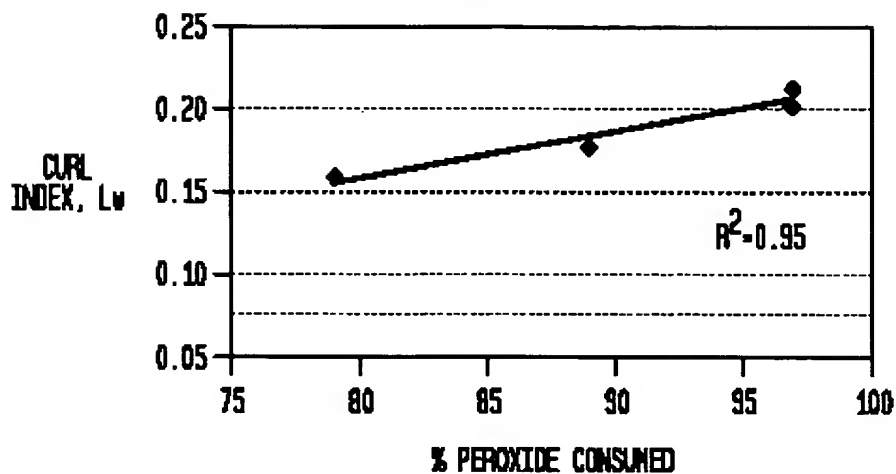
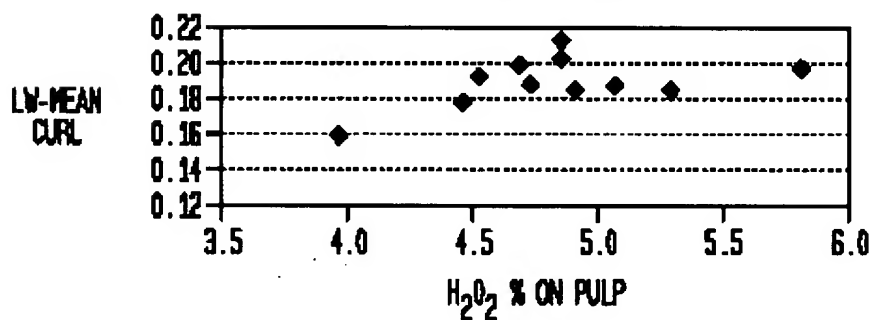
Example						
		36	37	38	39	40
% Refiner Bleached Fiber		0	20	40	60	100
Basis Weight	lb/3000ft ²	8.9	8.5	8.5	8.3	7.2
Caliper	In	33.7	34.0	34.6	36.5	34.9
Bulk	ft ³ /lb	0.118	0.125	0.127	0.137	0.151
MD Tensile						
Max Load	g	679.737	529.313	462.691	470.589	308.430
% Disp	%	25.667	24.426	23.296	25.759	24.667
CD Tensile						
Max Load	g	424.431	340.157	308.716	274.995	230.614
% Disp	%	4.500	5.296	4.981	6.037	6.370
Headbox Mean Curl		0.081	0.104	0.101	0.115	0.120
Porofil		8.3	8.6	8.4	9.4	10.3

The table shows the mixed pulps at 20%, 60% and 80% (Examples 37, 38 and 39) all have intermediate curl.

The features added to the product claims are not merely process limitations; rather the bleaching for example, increases fiber curl as hydrogen peroxide is consumed, reducing tensile and increasing porosity or porofil values of sheet using the fiber. *Note Figures 3 and 7, reproduced below:*

FIG. 3

SECONDARY EXAMPLES 9-20

**FIG. 7**MEAN CURL VS
HYDROGEN PEROXIDE CONSUMED

Note, also, in Table 9 that the sheet so-produced has lower tensiles (softer) than the control sheet. So, also, short duration times lead to less fibrillation and are likewise product attributes.

This *Amendment* is being filed with a *Petition* and fee for a one-month extension of time and a Request for Continued Examiner Under 37 CFR §1,114. If additional extensions or fees are necessary, please consider this a *Petition* therefor and charge any fees to Deposit Account No. 50-0935. Also, if an additional fee for new Claim 85 is required, please charge our Deposit Account No. 50-0935.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Michael W. Ferrell". The signature is stylized with a large, looped "M" and a cursive "W".

Michael W. Ferrell
Attorney for Applicant
Reg. No. 31,158

Ferrells, PLLC
P.O. Box 312
Clifton, Virginia 20124-1706
Telephone: 703-968-8600
Facsimile: 703-968-5500
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